Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Facilitate the Use of Cellular Telephones and other Wireless Devices Aboard Airborne Aircraft	)	WT Docket No. 04-435

REPLY COMMENTS OF SITA

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SUMMARY

As a representative of the airline industry and the world's leading provider of global Information Technology and Telecommunications solutions to the air transport and related industries, SITA and its members have been actively involved in regulatory and technical groups and proceedings in the United States, Europe and Asia-Pacific region aimed at studying and developing viable solutions to expand the availability of services to passengers and crew members aboard airborne aircraft by allowing them to use their own handsets to maintain connectivity during flights.

In its review of the comments filed in this proceeding, SITA is pleased to observe that, in general terms, there is considerable consensus in the submissions: most respondents acknowledge that there is a demand for in-flight wireless services, that technology exists to allow the use of passengers' handsets onboard planes and that there is a proper role for the Commission to facilitate competition by ruling in a technology neutral way while accepting that there are certain specific aviation related issues that need to be addressed. There is also universal agreement that whatever system or technology is used, there cannot be harmful interference to existing terrestrial networks or to the aircraft's navigation or communications systems.

More importantly, most commenters agree on the potential use of airborne picocell architecture as the ultimately effective technological solution to support the use of wireless devices on aircraft. Other features of the picocell system on which most responders agree is technological neutrality and that these onboard systems should support all cellular and PCS air interfaces.

Nonetheless, there are a few issues where some disagreement remains among commenters and which perhaps need amplification. These issues principally relate to (i) the use of channel selecting devices, (ii) the concept of "harmful interference" and (iii) the appropriate licensing regime for onboard picocell operations. SITA recognizes that the use of passengers' handsets onboard aircraft raises both technical and legal issues and believes that the way forward to successfully address these lies in the willingness of all interested parties to seek a workable, globally harmonized solution that takes into account the unique nature of airborne wireless services and the particular needs of the aviation industry. In these reply comments, SITA focuses discussion on these issues, endeavoring to address them with the benefit of its aviation expertise and from a global perspective.

With respect to SITA's proposed channel selector (also referred to earlier as a Network Control Unit ("NCU")), SITA contends that, from a legal standpoint, it is inappropriate to characterize it as a "jamming" device. Far from being designed to jam or disrupt authorized communications, airborne picocell system channel selectors are intended to facilitate them, while at the same time avoiding harmful interference to outside networks or aircraft avionics.

As regards the technical standard that should be associated with the legal concept of "harmful interference" in the context of airborne transmissions, SITA recommends that the Commission should not act unilaterally, but recognize that all of the affected regulatory bodies both within and outside the United States must approve the onboard technology in order for the service to proceed. The Commission should await the results of the technical bodies examining this issue to see if a consensus develops. In light of the

global nature of the airline industry, SITA would encourage the Commission to factor in such international technical findings in its ultimate decision-making.

Finally, SITA remains convinced that in light of the unique circumstances surrounding in-flight operations, a streamlined, non-exclusive licensing regime for picocell systems onboard US-registered aircraft, coupled with FCC recognition of the licensing authority of the country of registration of foreign aircraft will best serve the needs of airborne wireless services and comply with US treaty obligations.

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REPLY COMMENTS OF SITA

The Societe Internationale de Telecommunications Aeronautiques ("SITA") hereby submits its reply comments on the Federal Communications Commission's ("Commission") Notice of Proposed Rulemaking concerning the use of passengers' wireless devices onboard aircraft in flight.[1]

I. Introduction

As a representative of the airline industry and the world's leading provider of global Information Technology and Telecommunications solutions to the air transport and related industries, SITA and its members have been actively involved in regulatory and technical groups and proceedings in the United States, Europe and Asia-Pacific region aimed at studying and developing viable solutions to expand the availability of services to passengers

[1] *Amendment of the Commission's Rules to Facilitate the Use of Cellular Telephones and other Wireless Devices Aboard Airborne Aircraft*, 20 FCC Rcd 3753 (2005), published in the *Federal Register* March 10, 2005 (hereafter cited as "*Notice*").

and crew members aboard airborne aircraft by allowing them to use their own handsets to maintain connectivity during flights.

The primary concern in this proceeding has been the prevention of harmful interference to terrestrial wireless networks. The Federal Aviation Administration ("FAA") is separately examining harmful interference to an aircraft's navigation and communications systems. The rationale underpinning the Commission's original ban on airborne usage of 800 MHz cellular handsets is essentially to prevent the risk of unwanted emissions causing harmful interference to terrestrial-based systems.[2] There is general agreement among respondents that simply removing the cellular handset prohibition would not be in the public interest. SITA agrees that current restrictions on airborne usage of cellular and PCS handsets cannot simply be removed; such liberalization will require the Commission to be satisfied that airborne operations will not cause harmful interference.

As SITA explained in its initial comments, after numerous studies, tests and demonstrations, an "onboard pico cell" system has been designed that eliminates the risk of harmful interference to terrestrial wireless networks in addition to providing the necessary degree of protection to the aircraft's navigation and communications systems. The system is designed to electromagnetically "seal" the aircraft to terrestrial networks, while at the same time being operated at low enough power so as not to interfere with any terrestrial networks or the aircraft's avionics. Although SITA recognizes that additional testing and review is still necessary, the results to date are promising.

In its review of the comments filed in this proceeding, SITA is pleased to observe that, in general terms, there is considerable consensus in the submissions: most respondents

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[2] *Notice*, at ¶ 1.

acknowledge that there is a demand for in-flight wireless services, that technology exists to allow the use of passengers' handsets onboard planes and that there is a proper role for the Commission to facilitate competition by ruling in a technology neutral way while accepting that there are certain specific aviation related issues that need to be addressed. There is also universal agreement that whatever system or technology is used, there cannot be harmful interference to existing terrestrial networks or to the aircraft's navigation or communications systems.

More importantly, most respondents agree on the potential use of airborne picocell architecture as the ultimately effective technological solution to support the use of wireless devices on aircraft.[3] In this sense, even the most critical commenters acknowledge that picocell concepts along with mitigation techniques may effectively support airborne wireless services without harming terrestrial services and networks. Other features of the picocell system on which most responders agree is technological neutrality and that these onboard systems should support all cellular and PCS air interfaces.[4]

Nonetheless, there are a few issues that need amplification. These include issues relating to the provision of services on aircraft registered in countries other than the United States and the proper characterization of the equipment necessary to ensure that there is no

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[3] CTIA – The Wireless Association™ comments at 5 and 9; Cingular Wireless and Verizon Wireless comments at 2; Sprint comments at 2 and 6; Space Data Corporation comments at 3; The Boeing Company comments at 2-3; Rockwell Collins Inc. comments at 2-3; Honeywell International Inc. comments at 3; Aircell Inc. comments at 1-4; Telenor Satellite Services Inc. and ARINC Inc. comments at 2.

[4] *E.g.*, Cingular Wireless and Verizon Wireless comments at 24; Sprint comments at 8; Motorola Inc. comments at 3-4; Honeywell International Inc. comments at 8; CTIA – The Wireless Association™ comments at 10-11; Rockwell Collins Inc. comments at 4; Telenor Satellite Services Inc. and ARINC Inc. comments at 2; The Boeing Company comments at 11-12.

harmful interference with terrestrial networks. SITA recognizes that the use of passengers' handsets onboard aircraft raises both technical and legal issues and believes that these need to be addressed on a harmonized basis, particularly in light of the international nature of the airline industry. In these reply comments, SITA will focus discussion on some of these issues, endeavoring to address them with the benefit of its aviation expertise and from a global perspective.

II. The commenters' main legal, technical and policy concerns regarding the implementation of picocell systems

Although there is substantial agreement among respondents that a picocell system offers the best solution to comply with the non-harmful interference requirement, some parties remain skeptical about the successful implementation of such a system.[5] Essentially, the main issues questioned by parties relate to (i) the use of channel selecting devices, (ii) the concept of "harmful interference" and (iii) the appropriate licensing regime for onboard picocell operations.

With respect to the use of protection devices such as SITA's proposed channel selector (also referred to earlier as a Network Control Unit ("NCU"), some respondents argue that it poses legal problems, as these devices could be characterized as "jammers" and thus considered illegal.[6]

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[5] CTIA – The Wireless Association™ comments at 5; Cingular Wireless and Verizon Wireless comments at 2; Sprint comments at 2.

[6] CTIA – The Wireless Association™ comments at 11; Cingular Wireless and Verizon Wireless comments at 11; Motorola Inc. comments at 6-7.

An additional issue raised by some respondents relates to the traditional, international definition of "harmful interference."[7] In this connection, some commenters contend that such definition should be reinterpreted or associated with a special interference standard for picocell operations on board aircraft.[8] One submission even pushes the argument further to suggest that, instead of prescribing standards for the level of permissible interference, the Commission should rely on existing cellular and PCS license holders to come up with a solution through industry cooperation and private standard development.[9]

SITA is mindful of these commenters' legal, technical and policy concerns regarding airborne services. SITA or its members have been active participants in the work being done by other regulatory bodies and technical groups such as the FAA and RTCA, Inc. (RTCA) in the United States, EUROCAE, the ECC/CEPT and EASA in Europe and the Asia-Pacific Telecommunity ("APT") in Asia. In all of these regulatory bodies and technical groups these critical issues have been examined and sensible proposals have been formulated with a view to developing a globally-harmonized set of regulatory requirements. As explained in greater detail below, SITA believes that the way forward to successfully address these challenging issues lies in the willingness of all interested parties to seek a workable, globally harmonized

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[7] 47 C.F.R. § 2.1. Section 2.1 defines harmful interference as "Interference which… seriously degrades, obstructs, or repeatedly interrupts a radio communication service operating in accordance with these [international] Radio Regulations". This definition is consistent with Article 1.169 of the ITU Radio Regulations.

[8] The Boeing Company comments at 13-15; Qualcomm Inc. comments at 17; Cingular Wireless and Verizon Wireless comments at 15-21; *See also* Motorola Inc. comments at 8; Sprint comments at 15.

[9] Cingular Wireless and Verizon Wireless comments at 6-14.

solution that takes into account the unique nature of airborne wireless services and the particular needs of the aviation industry.

III. SITA's proposed approach to addressing the commenters' main points of concern

A. Use of channel selectors

As explained in its initial comments, under SITA's proposed operations an NCU has been designed to ensure that the airborne picocell network is electromagnetically confined within the aircraft, thereby allowing the use of onboard wireless handsets while avoiding any risk of harmful interference to either terrestrial networks or the aircraft's avionic systems. By creating a noise floor which will in effect prevent visibility of the terrestrial networks to onboard handsets, the NCU will ensure that technology compliant handsets and portable electronic devices (PEDs) communicate only with the onboard picocell (at minimum power levels), while at the same time preventing any attempt by those or any other handsets and PED's to access terrestrial base stations. The low power levels of the handset transmissions and the onboard transceiver in turn will eliminate the risk of harmful interference to both the aircraft's avionic systems and terrestrial networks. Therefore, rather than preventing calls, the purpose of the NCU is to facilitate communications, and rather than creating interference, its function is to avoid it.

Given the purpose of SITA's NCU and the function it is designed to perform, SITA contends that it is wholly inappropriate to characterize it as a "jamming" device from the legal point of view. Under United States law, so-called "jammers" are devices deliberately designed to prevent, jam or disrupt wireless communications. Their use is unlawful because it entails the willful or malicious blocking or interrupting of otherwise authorized

communications.[10] Therefore, to characterize NCU designs for picocell systems as a "jamming" technology must entail the conclusion that such systems are intended to disrupt otherwise authorized communications through airborne handsets, when in fact their purpose is precisely the opposite: namely to facilitate calls from and to such handsets (which would not otherwise be authorized), while avoiding at the same time harmful interference both to terrestrial networks and to the aircraft's avionic systems. It follows that, from a legal standpoint, airborne picocell system channel selectors cannot properly be characterized as "jamming" devices nor can their use be said to involve willful or malicious interference with authorized radio communications.

This approach is also consistent with the interpretation of the relevant European legislation[11] on radio equipment that has been advanced by the Telecommunication Conformity Assessment and Market Surveillance Committee (TCAM) of the European Commission's Enterprise and Industry Directorate-General.[12] TCAM's view is that picocell channel selecting devices should not be characterized as jammers as their function is to avoid interference to terrestrial networks – the exact opposite of what jammers do. TCAM thus

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[10] *See* 47 USC §§ 301, 302a, 333. *See also Use of Transmitters Designed to Prevent, Jam or Interfere with Cell Phone Communications is Prohibited in the United States* DA-05-1776 (June 27, 2005).

[11] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("R&TTE Directive") OJ L 091/10 (1999). The R&TTE Directive provides that wireless telegraphy apparatus shall not cause harmful interference and it is generally regarded as outlawing jamming devices.

[12] *On board cellular passenger communications systems*, DG ENTR/H/5, TCAM 19 (05) 86 (July 30, 2005).

concluded that in flight passenger communication systems such as that proposed by SITA could be feasibly designed to comply with the R&TTE Directive.

In the interest of facilitating the introduction of wireless services onboard aircraft, and given the similarities between European law[13] and United States law[14] regarding radio equipment regulation, SITA believes that there is no reason for the Commission to deem airborne picocell system channel selecting operations to be prohibited under United States law.

B. The concept of "harmful interference"

An issue raised by some respondents relates to what technical standard should be associated with the legal concept of "harmful interference" in the context of airborne transmissions.

SITA believes that any solution in this regard should be oriented to serving a number of fundamental objectives. Firstly, there is a need to encourage international consistency. "Harmful interference" is an internationally accepted concept that has been adopted in most jurisdictions through similar legal definitions.[15] Thus, its interpretation in the context of airborne wireless services should not significantly vary from country to country in order for airlines to be able to globally deploy picocell systems and offer such services wherever their planes operate. Therefore, SITA strongly recommends that the Commission continue to

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13 R&TTE Directive.

14 47 USC §§ 301, 302a, 333.

15 *Cf.* 47 C.F.R. § 2.1.; R&TTE Directive at Article 2(i). *See also* Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive) OJ L 108/21 (2002) at Article 2(2)(b).

monitor the work being done on this issue by technical groups in other parts of the world to determine whether a consensus develops. In particular, the CEPT/ECC Spectrum Engineering Working Group has made substantial progress towards addressing this issue and intends to release a report this October 2005.

Secondly, the particular needs of the aviation industry should be borne in mind at all times. In addition to protecting terrestrial wireless networks from harmful interference, picocell systems onboard aircraft must also provide the necessary degree of protection to the aircraft's navigation and communications systems. As an airline industry-owned organization, SITA has a primary concern and objective that the use of onboard handsets should not create a risk of interference to air safety or navigation. As the *Notice* recognizes,[16] in the United States the FAA has primary responsibility for air safety and is actively reviewing this issue through RTCA.[17] Other countries' aviation bodies, such as EUROCAE in Europe,[18] are also examining technical issues concerning harmful interference to aircraft. SITA therefore strongly recommends that the Commission continue to coordinate its efforts with those being undertaken by aviation safety bodies in order to ensure a consistent approach when regulating on interference standards.

For these reasons, SITA recommends that the Commission should not act unilaterally but recognize that all of the affected regulatory bodies both within and outside the United States must approve the onboard technology in order for the service to proceed. Those other

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16 *See*, *e.g.*, *Notice* at ¶ 3.

17 *Id.* at ¶ 9.

18 EUROCAE's WG-58 is reviewing EMC issues related to the use of new technology PEDs on aircraft. *See* http://www.eurocae.org/cgi-bin/home.pl?Target=php/workgroup.php%3Fver%3Dva&Num=2

bodies are addressing these issues with input from aeronautical experts, as well as terrestrial wireless carriers. In light of the global nature of the airline industry, SITA would encourage the Commission to factor in such international technical findings in its ultimate decision-making.

Furthermore, any standard developed to regulate emission limits in airborne operations needs to be sustainable and thus consistent with technology innovation, pro-competitive, and embrace deregulatory initiatives in spectrum policy, both domestically and internationally. Indeed, this approach would be consistent with Commission efforts to date in proposing and implementing alternative approaches to spectrum management with a view to encouraging market-oriented solutions that would account for technical developments, including improved tolerance levels to potential sources of network interference.[19] As the Commission recognizes, spectrum policies should reflect the increased ability of wireless networks to tolerate interference. Such advances in technology potentially justify revisiting traditional models based upon transmitter operation control and evolving toward more flexible approaches which acknowledge improvements of the general level of receiver performance with respect to interference immunity.[20]

Finally, any solution to the issue of acceptable interference levels needs to be practicably workable, which includes recognition of the need for global harmonization. SITA therefore disagrees with Cingular Wireless and Verizon Wireless' proposal to have the Commission define harmful interference based on an exceedingly low threshold (less than 1

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[19] *See Interference Immunity Performance Specifications for Radio Receivers* ("*Interference Immunity*"), ET Docket No. 03-65 (rel. Mar. 2003); *Spectrum Policy Task Force Report*, ET Docket No. 02-135 (rel. Nov. 2002).

[20] *Interference Immunity* at ¶ ¶ 5-9.

dB)[21] or, alternatively, to substitute existing cellular and PCS licensees' industry cooperation and private arrangements for predictable regulation-prescribed standards,[22] even while technical groups within and outside the United States are still studying this issue. Given that a well engineered picocell system will eliminate the risk of harmful interference, the Commission's regulatory mandate of protecting licensees from harmful interference can be effectively discharged through a streamlined, non-exclusive licensing model with the appropriate provisions to prevent and correct potential deviations. As a practical matter, a licensing scheme under a secondary status, coupled with a progressive, internationally harmonized, permissible interference standard, is a more feasible solution than an "integrated airborne-terrestrial spectrum management" approach which would require putting airborne operations under the control of individual terrestrial wireless licensees.[23]

C. Licensing regime

The other major issue which needs to be addressed with a global harmonization perspective is the regulatory model for licensing airborne operations, both in terms of national licensing procedures and operation in the airspace of other countries. In this regard,

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[21] In a proceeding regarding interference to cellular systems, *AirCell, Inc.; Petition, Pursuant to Section 7 of the Act, for a Waiver of the Airborne Cellular Rule, or, in the Alternative, for a Declaratory Ruling*, *Order on Remand,* 18 FCC Rcd. 1926, ¶ 22 (2003), the Commission found that harmful interference would be indicated only by a very substantial excess, such as 7 dB or more.

[22] Cingular Wireless and Verizon Wireless comments at 6-14.

[23] *Id.*

many parties to this proceeding have expressed significant agreement with the approach advocated by SITA.[24]

As SITA explained in its initial comments, given the dynamic movement of aircraft, a regulatory model based upon traditional terrestrial, geographically-limited licensing criteria would be unworkable. In light of the unique character of aircraft that can travel both domestically and internationally at high speeds on constantly changing routes, and the electromagnetic "sealing" feature of SITA's proposed picocell system, SITA believes that the way forward to achieve a practical, globally harmonized regulatory model for airborne services is to implement a licensing regime flexible enough to allow for technological innovation. Such a regime should also foster the rapid and competitive deployment of wireless services onboard aircraft, while ensuring at the same time the necessary protection against harmful interference and the required consistency with long-established principles of international aviation and telecommunications law.

1. The unique circumstances of airborne wireless services provided onboard "electronically sealed" aircraft

Airborne wireless services provided onboard "electronically sealed" aircraft possess unique characteristics and features that justify and demand a carefully designed regulatory solution.

Firstly, the mobility of airborne services cannot be compared to that supported by terrestrial wireless networks. An airplane in flight moves at high speeds and can travel along

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[24] The Boeing Company comments at 4-9 and 22-25; Rockwell Collins Inc. comments at 6-8; Honeywell International Inc. comments at 9-11; Ericsson Inc. comments at p. 6-8; Aircell Inc. comments at 5-8.

vast territories, both domestically and internationally, on constantly and sometimes unpredictably changing routes. Unlike base stations of terrestrial wireless networks, an airborne picocell system itself is a non-stationary device that will move over a constantly changing set of licensees' territories. Under these circumstances, extending the terrestrial licensees' rights to aircraft in flight or mandating secondary market/spectrum lease schemes would require a constantly and unpredictably changing "consortium" of licensees as the aircraft moves along its flight path, assuming all licensees whose territories are being overflown at a given point in time and space are members of the relevant "consortium". Indeed, if onboard wireless services are to be technologically neutral and support all air interfaces, the implementation of the service would depend on the participation of every PCS and cellular licensee in the country, which is impossible to guarantee and unlikely to be achieved.

Secondly, the non-interfering and non-exclusive nature of a properly designed picocell system also justifies a streamlined, minimalist licensing scheme. The fact that the onboard picocell system will be embedded in an electronically sealed aircraft invisible to terrestrial networks makes it unnecessary to tie the licensing of airborne operations to terrestrial cellular and PCS licensees. Indeed, terrestrial operators need not set aside any spectrum for these aeronautical services, nor need they worry about their networks being exposed to harmful interference by the moving picocells or the passenger's handsets as they fly over their licensed territories.

Thirdly, airborne services are multinational in nature, as it will frequently be the case that on any one flight an aircraft will travel through the airspace of more than one country. Thus a workable solution is required to ensure that onboard picocell systems can use the

spectrum within an aircraft cabin irrespective of the national airspace that the aircraft may be crossing. To this end, there is a long-established international aviation regulatory regime to consider. In this sense, the approach advocated by SITA, which considers the state of registration of the aircraft as having jurisdiction in respect of the licensing of onboard operations, is not only a workable and convenient one but, more importantly, the approach adopted by international aviation regulation as well as international telecommunications law.[25]

SITA believes that a streamlined, non-exclusive licensing regime for picocell systems onboard U.S.-registered aircraft, coupled with FCC recognition of the licensing authority of the country of registration of foreign aircraft, will meet the unique needs of airborne wireless services and comply with U.S. treaty obligations.

2. Licensing regime for US-registered aircraft and US airlines

In its initial comments in this proceeding, SITA offered a regulatory model that reflects the unique nature of on board handset operations. In the case of airborne services provided on U.S.-registered aircraft and for U.S. airlines, SITA continues to believe that a nationwide, secondary, non-exclusive "fleet" or "blanket" license open for eligibility to third-party operators is the only practical system that would work.[26] SITA suggests that the license should be nationwide, rather than restricted to any particular route, in light of the likelihood that the route over which any particular aircraft will fly will frequently change. Additionally,

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[25] Articles 30 and 33 of the Chicago Convention of 1994; Resolution A29-19 of the ICAO Assembly; Article 18 of the ITU Radio Regulations.

[26] *See also* Rockwell Collins Inc. comments at 6-8; Honeywell International Inc. comments at 9-11; Ericsson Inc. comments at p. 6-8.

allowing for "fleet" or "blanket" licensing, along with a minimally-burdensome registration procedure for individual aircraft, will best comport with the airlines' need to maintain flexibility, as well as to minimize the need for Commission filings. This registration procedure will ensure that the database reflects each airplane's technical parameters and contact information, thereby facilitating enforcement of secondary licensees' responsibility not to cause harmful interference to stations of primary services.

Furthermore, a workable licensing scheme should avoid special eligibility restrictions. SITA believes that airlines should have complete freedom in choosing whether to hold the licenses and provide the service themselves, or to allow third party operators/licensees to run the systems. Moreover, given that airlines are responsible for ensuring the safety of flights, and that onboard picocell systems need to perform critical functions to that end, their discretion in deciding who will operate the service should not be restricted. Open eligibility will also foster the emergence of innovative offerings and the development of competitive business models. Finally, given the non-interfering nature of the systems and that no territorial exclusivity or rights to protection from interference are to be conferred, licenses should not be subject to competitive bidding.

SITA believes that technologically innovative wireless services require more flexible and market-oriented regulation. The unique circumstances of airborne wireless services provided onboard "electronically sealed" aircraft demand a licensing model consistent with such a progressive approach. In the context of its spectrum policies, the Commission has demonstrated its readiness to implement creative regulatory approaches and new licensing schemes to provide opportunities for new technologies and services and to allow licensees the flexibility to implement and modify these new technologies and services in accordance

with market forces.[27] Hence, SITA applauds such dynamic and proactive measures to open opportunities for innovation and believes that the Commission should not seriously consider replicating terrestrial based licensing schemes to govern in-flight picocell systems. SITA believes its proposed licensing scheme for picocell operations onboard U.S.-registered aircraft has been devised in a spirit consistent with the Commission's spectrum policies, given the innovative nature of airborne wireless services and the challenges they must face in order to be deployed on a globally harmonized basis.[28]

3. Licensing regime for foreign airlines

In the case of foreign airlines, SITA reiterates that the Commission should recognize a license issued by the aircraft's State of registration without requiring an additional Commission-issued license. This is not to say that the FCC and other relevant U.S. regulatory bodies would be deprived of their regulatory roles, but that as far as the licensing is concerned, the responsibility lies with the State in which the aircraft is registered. Concerns about interference can be met by requiring that foreign-registered aircraft comply with the technical regulations prescribed by the Commission (including the obligation to register with the U.S. (industry-operated) database) without also requiring that they obtain a separate FCC license.

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[27] *Interference Immunity* at ¶ 7.

[28] In light of the unique circumstances surrounding these proposed on board services detailed above, SITA does not believe that any action the Commission takes here with respect to a licensing scheme should pre-judge the Commission's consideration of other spectrum policies (such as "interference temperature" or a "spectrum underlay") that are being addressed in separate proceedings.

Such treatment derives from international aviation regulation and international telecommunications law, as well as from the Commission Rules on foreign aircraft stations. As explained in SITA's initial comments, Articles 30 and 33 of the Chicago Convention 1944[29] make clear that the licensing authority for the installation and operation of radio transmitting apparatus onboard aircraft lies with the country where the aircraft is registered, and that licenses issued by the contracting State in which the aircraft is registered shall be recognized as valid by other contracting States. Furthermore, Article 18 of the ITU Radio Regulations also makes clear that the country which is responsible for the licensing of an airborne transmitting station is the country of registration of the aircraft. This principle of the State of Registry has been applied in Section 87.191(a) of the Commission's Rules, concerning certain aviation services.[30] Therefore, requiring a separate FCC license in

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[29] Convention on International Civil Aviation, signed Dec. 7, 1944.

[30] 47 CFR 87.191. Section 87.191(a) of the Commission's Rules provides:

> Aircraft of member States of the International Civil Aviation Organization may carry and operate radio transmitters in the United States airspace only if a license has been issued by the State in which the aircraft is registered and the flight crew is provided with a radio operator license of the proper class, issued or recognized by the State in which the aircraft is registered. The use of radio transmitters in the United States airspace must comply with these rules and regulations.

See also Amendment of Part 87 of the Commission's Rules to Establish Technical Standards and Licensing Procedures for Aircraft Earth Stations, 7 FCC Rcd. 5895 (1992) at ¶ 31. In this proceeding, the Commission otherwise acknowledged that foreign-registered aircraft need not obtain a separate FCC license to operate a radio station in the United States indicating that such foreign aircraft are not subject to the same licensing requirements as domestic-registered aircraft:

> BT and ARINC/ATA point out that in accordance with the Convention of International and Civil Aviation, effective 4/4/47, Article 30, aircraft of foreign registry are not required to obtain a license from a country over which they fly -- in this case, the U.S. -- if they have a license from the country of registry. They recommend that Sections 87.51(a) and (b) of our Rules, 47 C.F.R. Secs. 87.51(a) and

addition to one from the aircraft's State of registry, would not only be inappropriate and practically inconvenient but, more importantly, inconsistent with international law.

In a separate Notice of Proposed Rule Making concerning aeronautical earth stations,[31] the Commission suggests, when considering Article 30 of the Chicago Convention, that the Convention does not explicitly prohibit the nation over which a foreign registered aircraft is flying from also issuing its own license for a transmitter on that aircraft.[32] In its Reply Comments in that proceeding,[33] SITA explains in detail how this claim of the Commission overlooks the provisions of Article 33 of the Convention, which (within the same Chapter of the Convention as Article 30) states that "licenses issued…by the contracting State in which the aircraft is registered shall be recognized as valid by the other contracting States…" The imposition by the Commission of a dual licensing system on foreign registered aircraft would be inconsistent with the terms of this treaty obligation. It would also be contrary to the clear intent of Resolution A29-19 of the ICAO General Assembly,[34] which expressly contemplates

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(b), be amended by adding "except as provided in Section 87.191." Sections 87.51(a) and (b) provide specifically for commissioning of U.S. flag aircraft earth stations. Section 87.191 of our Rules, 47 C.F.R. Sec. 87.191, provides for operation of foreign aircraft in U.S. airspace. These rules are clearly distinct in their focus -- it is not necessary to refer to foreign aircraft under rules for domestic aircraft.

31 *Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service*, IB Docket No. 05-20, 20 FCC Rcd. 2906 (February 9, 2005), published in the *Federal Register* April 20, 2005.

32 *Id.* at fn. 156.

33 SITA reply comments in IB Docket No. 05-20 at 5.

34 Resolution A29-19 was adopted by the ICAO Assembly in the 28th (Extraordinary) Session of the Assembly held in Montreal October 22-26, 1990, and can be downloaded at: http://www.icao.int/icao/en/res/a29_19.htm.

that the *only* licensing required to authorize passenger services using radio transmitting apparatus for non-safety related transmissions while an aircraft is in flight over a third country is a license issued by the State of Registry of the aircraft (or by the State of the operator where Article 83 bis of the Convention applies).[35]

Finally, Commission recognition of the licensing authority of the aircraft's State of Registry for airborne picocell operations would ultimately benefit U.S. airlines insofar as the alternative – imposing an additional FCC licensing requirement on foreign aircraft – risks triggering a reciprocal obligation on U.S. carriers in order to allow them to provide these services when they fly over other countries. Indeed, that burden on U.S. airlines is likely to be greater in light of the number of countries the planes would overfly in providing overseas flights.

In summary, requiring a second license from the Commission would be contrary to the public interest because it would likely disadvantage U.S. airlines, and because it would denigrate the sanctity of international treaties and thus harm the long-term interests of the United States. SITA thus requests that the Commission avoid any inconsistency with United

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[35] It is relevant to note that in other regulatory groups around the world that have been studying these issues, a general consensus on this approach is likely to be achieved soon. For instance, the CEPT/ECC/WGRA has put forward a draft ECC Decision on the free circulation and use of Airborne GSM Base Transceiver Stations, which responds to the need for a globally harmonized approach to provide access to the required spectrum and to reduce the regulatory requirements placed on administrations, network operators and aircraft operators. The draft Decision, in light of the fact that there is no harmful interference with the terrestrial networks, sets forth the principle that administrations should allow free circulation and use of airborne systems provided that the system operator is either authorized to use the required spectrum, or has been exempted from the need to be so, by the country of registration of the aircraft. The upcoming APT wireless forum in September 2005, is reviewing a draft framework to similar effect with a view to recommending adoption by the APT Management Committee.

States' treaty obligations and reject requiring a separate FCC license in addition to one from the aircraft's State of registry.

IV. Public safety and national security issues

SITA appreciates that any solution for airborne wireless services should incorporate specific public safety and national security-related operational capabilities. SITA acknowledges that in the United States wireless carriers are affected by statutory obligations regarding law enforcement assistance. In particular, as the Department of Justice, the Federal Bureau of Investigation and the Department of Homeland Security suggest in their comments,[36] SITA recognizes that wireless airborne service providers would be required to comply with the Communications Assistance for Law Enforcement Act (CALEA). SITA reiterates its willingness to comply with CALEA obligations. The non-CALEA operational capabilities suggested in the submissions of the Department of Justice, the Federal Bureau of Investigation and the Department of Homeland Security raise certain practical and other issues which SITA would be happy to discuss further with the relevant agencies.

V. Conclusion

For the foregoing reasons, SITA respectfully requests that, in replacing or relaxing the current ban on airborne usage of cellular handsets, the Commission adopt rules consistent with the unique circumstances of in-flight picocell systems. As explained in these comments, SITA believes that the way forward for the Commission to facilitate the use of

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[36] Department of Justice, Federal Bureau of Investigation and Department of Homeland Security comments at 5-6.

wireless handsets on aircraft lies in implementing a comprehensive regulatory solution flexible enough so as to allow for technological innovation and the rapid and competitive deployment of airborne services, while ensuring at the same time the needed protection against harmful interference and the required consistency with long-established principles of international aviation and telecommunications law.

Respectfully submitted,

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